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United States  
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## Highlights of Layers '99 Study Results: Part II Biosecurity

With new layer houses increasing in size, some holding 200,000 or more layers, introduction of pathogens into the layer house could be increasingly devastating to the layer producer. Most layer producers are taking precautions to ensure biosecurity on the farm site.

The USDA's National Animal Health Monitoring System (NAHMS) designed the Layers '99 study to provide both participants and the table egg layer industry with information on the United States' layer population for education and research purposes.

The USDA's National Agricultural Statistics Service (NASS) collaborated with VS to select a statistically-valid sample from 15 states<sup>1</sup> for Layers '99. The 15-state target population accounted for over three-quarters of the table egg layers in the U.S. on December 1, 1998. NASS enumerators collected the data that formed the basis of Part I from 526 farm sites from February 1 through 26, 1999. State and Federal

Veterinary Medical Officers and Animal Health Technicians collected data for *Part II: Reference of 1999 Table Egg Layer Management in the U.S.* from 252 farm sites via questionnaire administered from March 22 through April 30, 1999. Additional highlights of Part II related to general management practices are summarized in a separate Info Sheet. More detailed information on the study and the sampling methodology is available in NAHMS Layers '99 tabular summary reports.

### **Visitors**

Employees and visitors to the layer houses are potential sources of infectious agents.

- ◆ About two-thirds (68.1 percent) of farm sites did not allow visitors that did not have a business reason for visiting the operation in the layer houses.
- ◆ The percentage of farm sites that allowed non-business visitors into the layer houses did not differ by size of farm site. However, visitors were more likely to be required to sign in on farm sites of 100,000 or more layers than on farm sites with fewer layers.
- ◆ About two-thirds (62.9 percent) of farm sites that allowed non-business visitors required the visitors' vehicles not to have been on another poultry farm that day. A total of 7.6 percent of farm sites that allowed non-business visitors required the vehicle to be cleaned and disinfected upon entering, and 30.3 percent required the vehicle to be parked in a restricted area.
- ◆ A total of 22.9 percent of farm sites did not allow business visitors, such as a salesperson or feed service personnel, in the layer houses. A similar percentage required business visitors to sign in (37.4 percent) as did not require it (39.7 percent). The percentage of farm sites that allowed business visitors in layer houses without signing in ranged from 29.1 percent of farm sites in the Great Lakes region to 59.7 percent in the Central region (regions are shown in Figure 1).

Figure 1

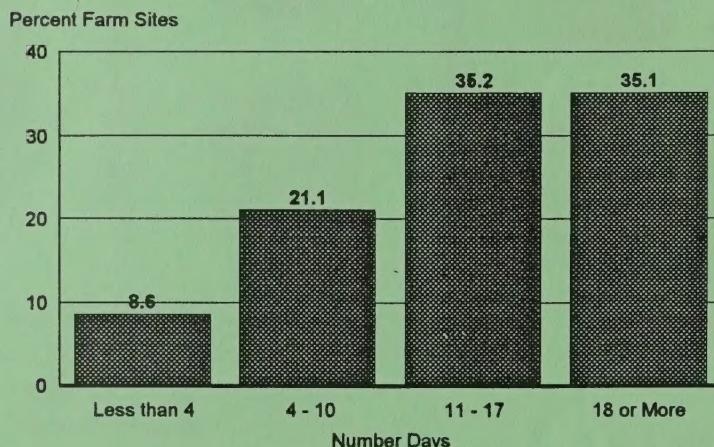
### **Layers '99 Study Regions**



<sup>1</sup> Alabama, Arkansas, California, Florida, Georgia, Indiana, Iowa, Minnesota, Missouri, Nebraska, North Carolina, Ohio, Pennsylvania, Texas, and Washington.

Figure 2

### Percent of Farm Sites by Number of Days Layer Houses Were Usually Empty Between Flocks



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- ◆ About two-thirds (61.6 percent) of farm sites that allowed business visitors required the visitors' vehicles not to have been on another poultry farm that day. A total of 15.9 percent of farm sites that allowed business visitors required the vehicle to be cleaned and disinfected, and 27.2 percent required the vehicle to be parked in a restricted area.
- ◆ Clean boots were required for visitors on 76.1 percent of farm sites, and footbaths were used by 34.0 percent of farm sites. Showers were required on 2.9 percent of farm sites.

- ◆ Over one-half of the farm sites required employees and crews not to be around other poultry and not to own any birds, although more farm sites had these requirements for employees than for crews. A change of clothes was required for employees by 17.6 percent of farm sites and for crews by 32.0 percent of farm sites.

#### Other Farm Site Biosecurity Practices

- ◆ The average *usual* down time between flocks ranged from 10.5 days for farm sites in the Central region to 20.4 days in the Great Lakes.
- ◆ About one-third (35.1 percent) of farm sites usually had a down time of 18 days or longer, while 8.6 percent of farm sites usually had a down time of less than 4 days (Figure 2). The median (midpoint) down time was 14 days.
- ◆ Nearly all (99.2 percent) farm sites *attempted* to capture and remove layers that had escaped from their cages before placing a new flock.
- ◆ Over 98 percent of farm sites emptied feeders and 91.3 percent emptied feed hoppers. About 80 percent each flushed water lines and dry cleaned cages, walls,

and ceilings, while 71.8 percent cleaned fans and ventilation systems between each flock.

- ◆ About one-third of farm sites never washed (39.4 percent) or disinfected (32.4 percent) egg belts/elevators between flocks.

#### Proximity to Poultry

- ◆ Overall, 25.7 percent of farm sites were within one mile of another premises with poultry. The percentage of farm sites within one-quarter mile of another premises with poultry ranged from 2.8 percent of farm sites in the Central region to 15.6 percent of farm sites in the West.

- ◆ Overall, less than 2 percent of farm sites had broilers, other poultry, or other domestic birds on the farm site. About one-third (34.1 percent) of farm sites had cattle. Cattle were most common on farm sites in the Southeast (44.2 percent) and West (42.8 percent) regions. One-half of the farm sites had cats (50.2 percent) and dogs (50.4 percent).

NAHMS Layers '99 management and biosecurity information are being combined with results of testing for *Salmonella enteritidis* to answer questions on how management affects occurrence of the organism in layer flocks.

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